

**WASHINGTON NATURAL AREAS PROGRAM
NATURAL AREA PRESERVE RECOMMENDATION**

Proposed Expansion of Trout Lake NAP

June 2012

BACKGROUND

The Trout Lake NAP was proposed in 1995 to protect populations of the following:

| | <u>Rank¹</u> | <u>State Status²</u> | <u>Federal Status³</u> |
|--|-------------------------|---------------------------------|-----------------------------------|
| 1) Oregon spotted frog (<i>Rana pretiosa</i>) | S4T2 G4 | Endangered | Candidate |
| 2) pale blue-eyed grass (<i>Sisyrinchium sarmentosum</i>) | S1/2 G1/2 | Threatened | |
| 3) Pulsifer's monkey-flower (<i>Mimulus pulsiferae</i>) | S2 G4 | Sensitive | |

¹ Ranking system used by the Natural Heritage Network

G=Indicator of global, i.e., rangewide, status

T=Indicator of status of infraspecific taxa

S=Indicator of state status

1=Critically imperiled because of extreme rarity or particular vulnerability to extinction/extirpation; typically 5 or fewer occurrences

2=Imperiled because of rarity or vulnerability to extinction/extirpation; typically 6 – 20 occurrences

3=Rare or uncommon but not imperiled; typically 21-100 occurrences

4=Apparently secure; typically more than 100 occurrences

5=Demonstrably widespread, abundant, and secure

²According to Washington Natural Heritage Program (2011)

³According to US Fish & Wildlife Service, 1999 Federal Register

The Trout Lake wetland system contains the second largest of the four known Washington populations of the Oregon spotted frog (*Rana pretiosa*). It is estimated that this species has been lost from 80-90% of its historic range (McAllister and Leonard 1997) and nearly extirpated from areas west of the Cascades, from the Willamette Valley to the Puget Trough (Federal Register, V. 58, No. 87, 1993). Trout Lake is the only one of the Washington locations without the introduced bullfrog (*Rana catesbeiana*), which is recognized as one of the major threats to the remaining populations of the Oregon spotted frog.

One of the largest populations of pale blue-eyed grass (*Sisyrinchium sarmentosum*) occurs within the proposed Trout Lake NAP boundary. This species is known from 14 occurrences in Washington and nine occurrences in Oregon. It is a candidate for listing as endangered in Oregon and is considered threatened in Washington by the Natural Heritage Program (WNHP 2011). The most recent status report on the species indicates that only five *Sisyrinchium sarmentosum* occurrences across the species' range are considered to be self sustaining (Ruchty and Raven 2009).

The proposed Trout Lake NAP boundary also contains one of only four known populations of Pulsifer's monkey-flower (*Mimulus pulsiferae*) in Washington. This is the largest of the Washington populations, containing the vast majority of the individuals of this species within the state.

In addition to these primary elements, the site supports the following other features:

| | <u>Rank¹</u> | <u>State Status²</u> | <u>Federal Status³</u> |
|--|-------------------------|---------------------------------|-----------------------------------|
| 1) Sandhill crane (<i>Grus canadensis tabida</i>) | S1 G2 | Endangered | |

| | <u>Rank¹</u> | <u>State Status²</u> | <u>Federal Status³</u> |
|--|-------------------------|---------------------------------|-----------------------------------|
| 2) Parry's knotweed (<i>Polygonum parryi</i>) | S1? G4 | Threatened | |
| 2) mid-elevation wetland | S1 G5 | | |
| 3) mid-elevation stream/riparian | S2 G5 | | |

The site is a staging area for sandhill cranes that breed in the nearby Conboy Wildlife Refuge, and contains potential breeding habitat for this species. The Trout Lake NAP is one of the highest quality freshwater wetland ecosystems left in the south-central portion of Washington State. The Trout Lake system is structurally diverse containing forested wetland, scrub-shrub wetland, emergent wetland, and riverine/riparian habitat. The site also provides areas of both seasonal and permanent ponding, providing hydrological diversity and creating niches for a variety of plants and animals

This proposal is to expand the current boundary of Trout Lake NAP to meet the following goals:

- to enhance the viability of the existing preserve by incorporating additional forested slopes within the immediate Trout Lake Creek watershed and enhancing connectivity to upstream and higher elevation habitats.
- to protect additional mature forest and oak woodland communities & potential rare plant habitat

SIZE

The current approved boundary for the NAP encompasses 2361 acres. The proposed addition would add approximately 170 acres to the northern end of the site (see attached maps). Currently, 1840 acres are owned and managed by the DNR as Natural Area Preserve.

LOCATION

The NAP is located approximately one mile northwest of the town of Trout Lake, situated 24 miles north of the city of White Salmon, all within the northwest corner of Klickitat County, Washington. The NAP is located within portions of Sections 4, 5, 8, 9, 10, 15 and 16, Township 6 North, Range 10 East, Willamette Meridian. The proposed addition is in section 5.

OWNERSHIP

The entire proposed expansion area is currently state-owned DNR trust land.

JUSTIFICATION

The goals of the proposed expansion are to improve the long-term viability of the Trout Lake NAP and of species associated with wetland habitats and to add additional Garry oak habitat to the site. The 170 acres contain mature forest and seasonal stream channels on slopes above Trout Lake Creek, which flows into the Trout Lake wetland system approximately one mile below the expansion parcel. Maintaining undisturbed, mature forest cover on areas in the immediate watershed of the creek and wetland is important to the long-term viability of the system because it protects water quality and flow rates into the creek. This in turn is particularly important to aquatic species such as the Oregon spotted frog, which are sensitive to sedimentation and to even relatively small changes in hydrology.

The expansion parcel is located between the existing NAP boundary and an adjacent, extensive block of US Forest Service land that extends to the north and west. Securing protection of the parcel will improve the long-term connectivity to these lands for the seasonal or longer-term movement of wildlife.

The proposed expansion would also add approximately 15 acres of Garry oak woodland habitat to the approximately 30 acres contained within the current boundary. This habitat type is very limited in the vicinity of the preserve, which is predominately wetland and mesic conifer forest, and is a high priority for conservation statewide. A number of oak-associated birds have been documented on the site and are likely to benefit from the protection of this habitat type, e.g. Lewis woodpecker, scrub jay, pygmy nuthatch, western bluebird, western wood pewee, and white-breasted nuthatch. The Trout Lake NAP has received funding support for protection of neotropical migrant birds in the past and is a Washington Audubon - designated Important Bird Area.

The oak woodland areas are also potential habitat for two rare plants: the state sensitive Pulsifer's monkeyflower and state threatened Parry's knotweed. Both plants occur in the preserve on similar habitat, approximately three-quarters of a mile to the southeast of the expansion parcel. The expansion parcel has not yet been surveyed for these species.

In addition, recent sightings of western gray squirrel have been reported from the site but are not yet verified. If there is a breeding population present, the expansion parcel would provide high quality habitat given the mature state of the conifer forest, the associated Garry oak woodlands, and proximity to water.

DESCRIPTION OF FEATURES

The proposed addition would add approximately 155 acres of mature conifer forest and 15 acres of Garry oak woodland to the existing NAP. Forested areas on the expansion parcel and surroundings are characterized by mixed species composition, with Douglas-fir (*Pseudotsuga menziesii*) and grand fir (*Abies grandis*) the most abundant tree species. Ponderosa pine (*Pinus ponderosa*), western larch (*Larix occidentalis*), western hemlock (*Tsuga heterophylla*), western red-cedar (*Thuja plicata*), lodgepole pine (*Pinus contorta* var. *latifolia*), and western white pine (*Pinus monticola*) are also present in varying amounts. Common understory species in these stands include vine maple (*Acer circinatum*), ocean spray (*Holodiscus discolor*), red-osier dogwood (*Cornus stolonifera*), salal (*Gaultheria shallon*), Oregon grape (*Berberis nervosa*), common snowberry (*Symphoricarpos albus*), hazelnut (*Corylus cornuta* var. *californica*), western swordfern (*Polystichum munitum*), vanilla leaf (*Achlys triphylla*), blue wildrye (*Elymus glaucus*), wild ginger (*Asarum caudatum*), and wild strawberry (*Fragaria vesca*).

DNR's Forest Resource Inventory System indicates the forest stands on the expansion parcel are approximately 100 years old. These conditions are similar to the few other forested areas on the preserve, except that the other areas are 20-30 years younger. A small area (<10 acres) in the northeast corner of the parcel appears to have younger forest, likely a result of blowdown following timber harvest on adjacent property. The entire parcel is designated as northern spotted owl Nesting, Roosting, and Foraging (NRF) habitat under the Department's Habitat Conservation Plan (HCP).

Other Garry oak woodland areas on the preserve have an understory dominated by oceanspray and a variety of grasses and forbs such as soft brome (*Bromus mollis*), prairie junegrass (*Koeleria cristata*), yarrow (*Achillea millefolium*), slender tarweed (*Madia gracilis*), and Spanish clover (*Lotus purshianus*). The Garry oak areas on the expansion parcel have had limited survey but are assumed to have similar species composition.

The upper reaches of two seasonal streams that flow into Trout Lake Creek occur within the parcel.

CURRENT USE

The parcel is currently under DNR trust land management and is managed as NRF habitat for the northern spotted owl under the Department's HCP. There are no other known uses of the property, although it is likely that it is used for hunting.

PRESERVE DESIGN

The proposed expansion boundary has been drawn to include the extent of DNR-managed land within the area of interest. This includes the vast majority of non-federal forested habitat in the area that has not had recent harvest activity.

MANAGEMENT CONSIDERATIONS

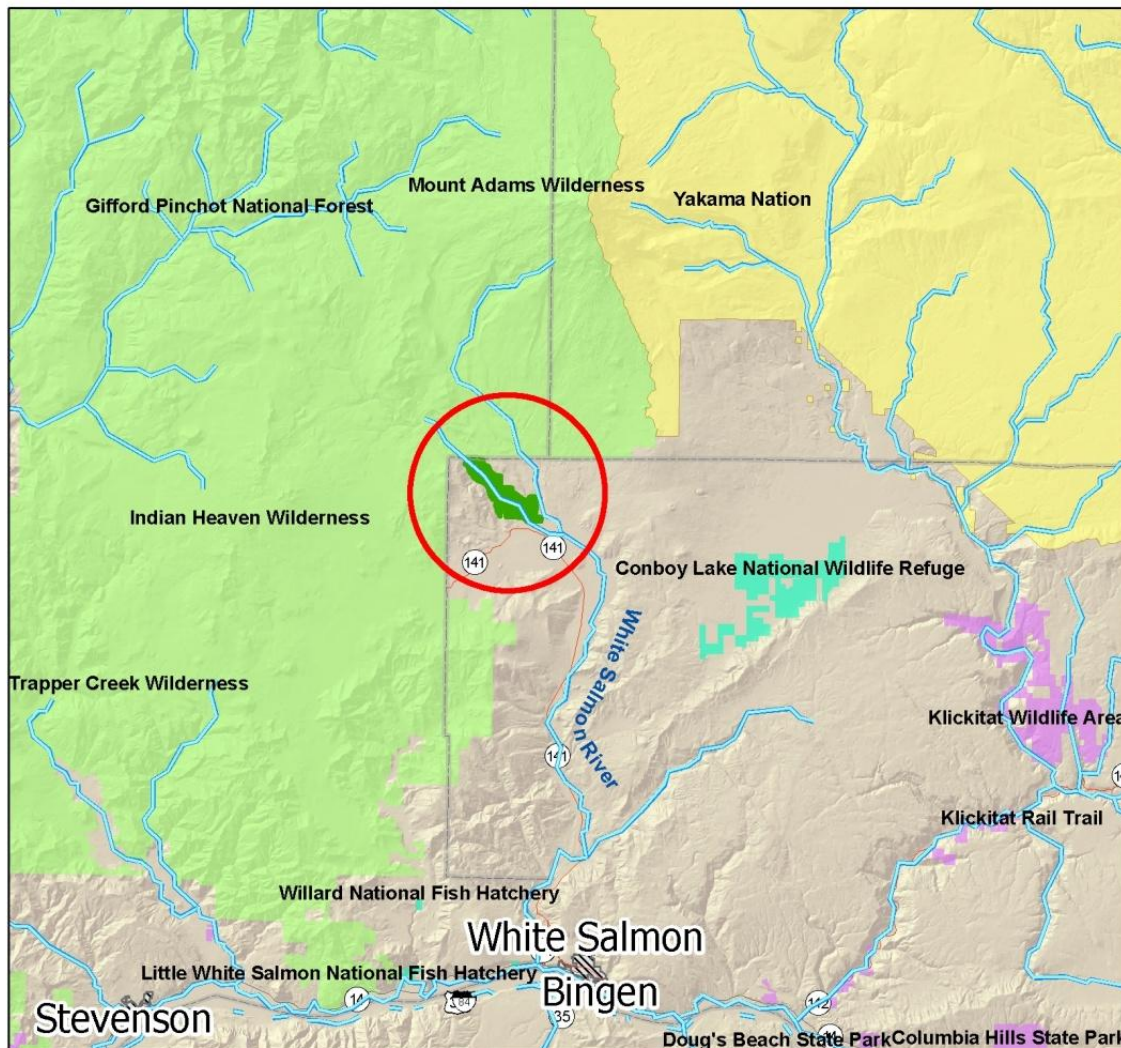
Addition of this parcel to the Trout Lake NAP would not add any significant management demands for the preserve. The existing boundary in this area is not fenced, so that no fencing would need to be moved. No new fencing or other access control needs are anticipated for the parcel. The area has not been closely surveyed for invasive species; however given the mature condition of the forest and the degree of buffering from vectors such as roads (especially for the oak habitat), no significant invasive species problems are anticipated.

REFERENCES CITED

McAllister, Kelly R. and William P. Leonard. 1997. Washington State Status Report for the Oregon Spotted Frog. Washington Dept. of Fish and Wildlife, Olympia, WA. 38 pp.

Ruchty, Andrea. and Andrea Raven. 2009. Conservation assessment for *Sisyrinchium sarmentosum* Suks. ex. Greene. Unpublished report for the USDA Forest Service Region 6, Oregon and Washington and USDI Bureau of Land Management, Oregon and Washington. 44pp.

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Trout Lake NAP

East Cascades Ecoregion

MAP LEGEND

- Trout Lake NAP
- County Boundaries
- Tribal Lands
- US Forest Service
- US Fish and Wildlife Service
- WA Dept. of Fish and Wildlife

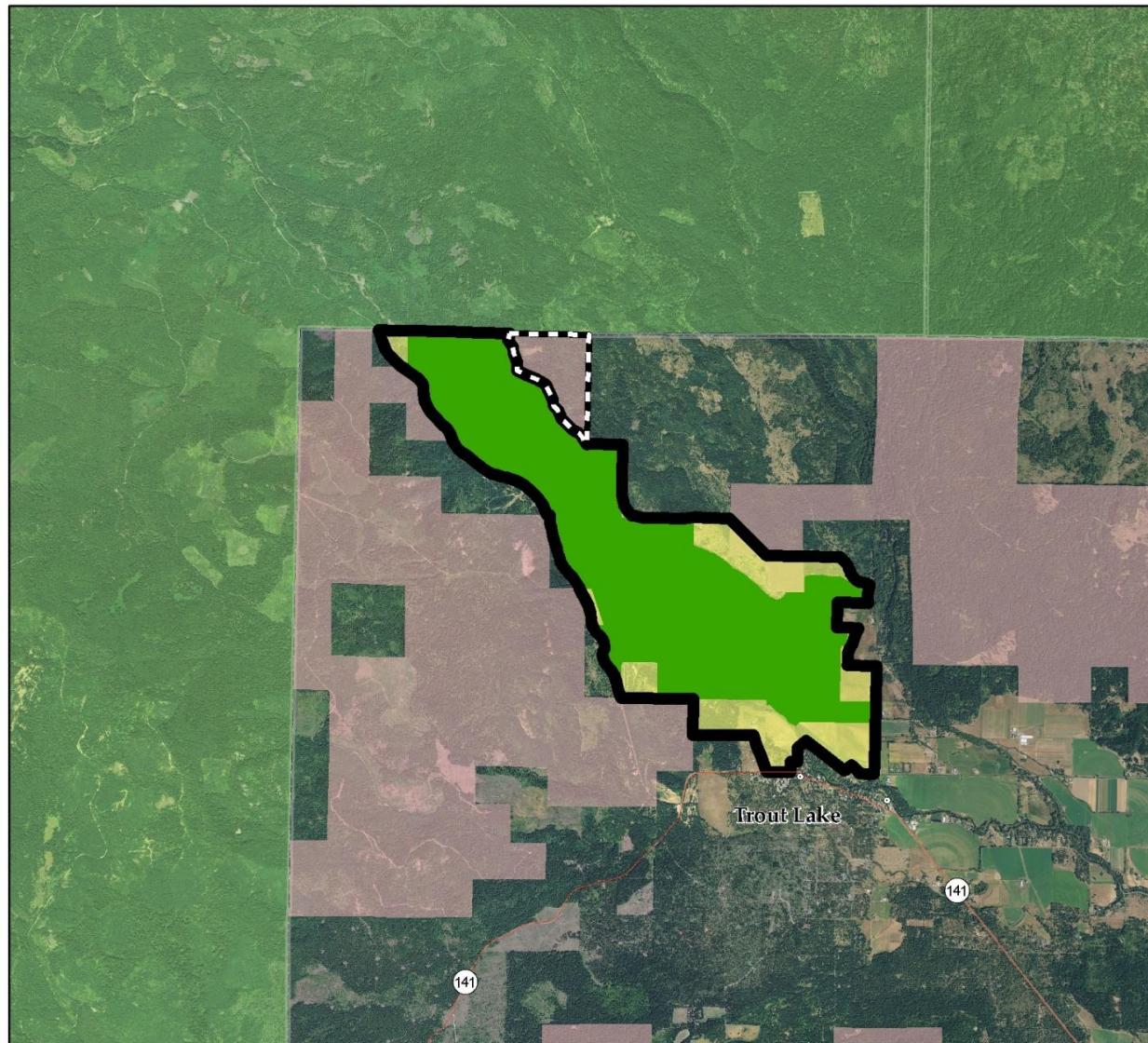


0 10,000 20,000 40,000 Feet

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DW 3-28-2012





Trout Lake NAP

East Cascades Ecoregion

MAP LEGEND

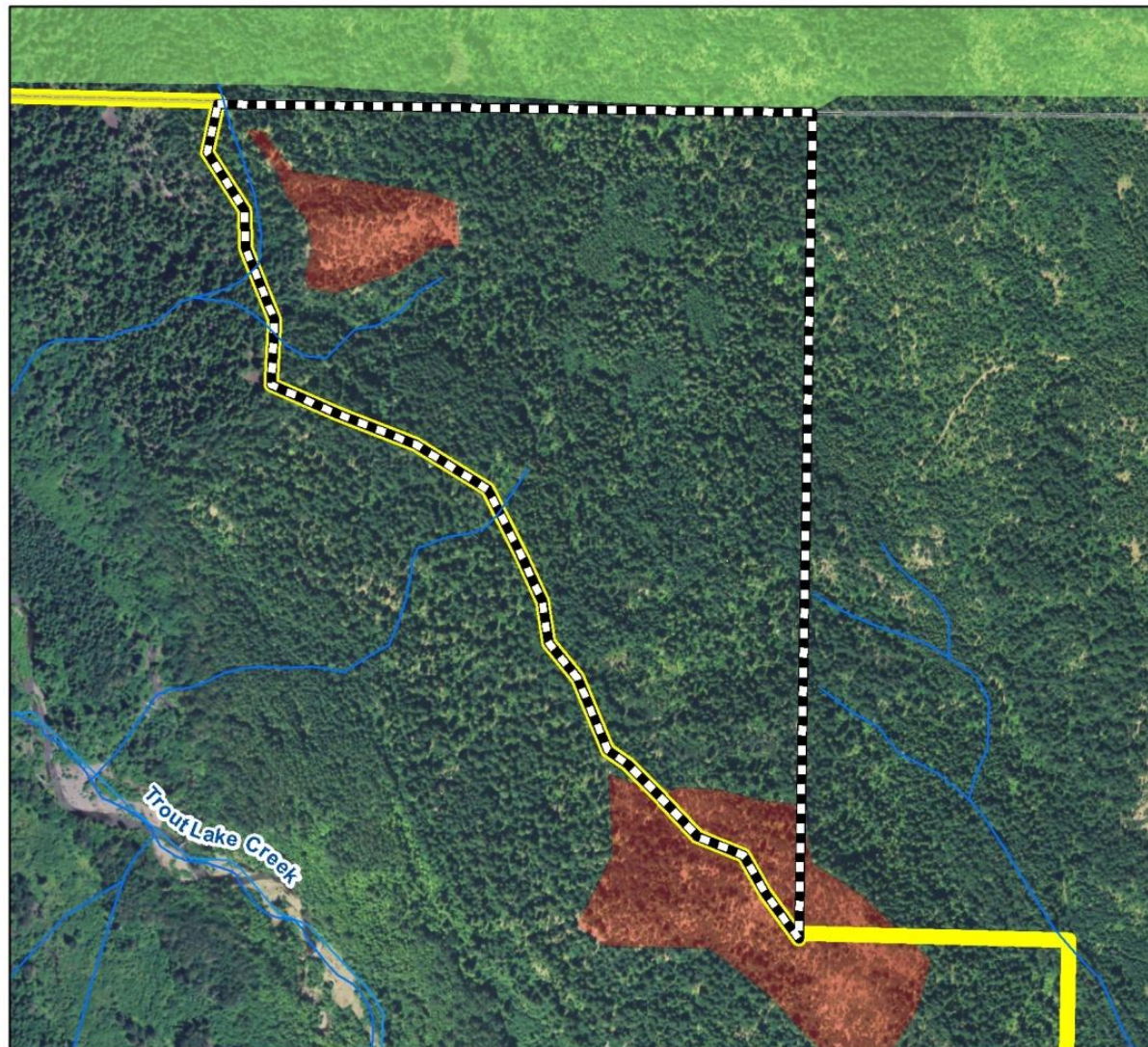
- Natural Area Preserve
- Proposed Boundary Expansion
- Proposed NAP Boundary
- Lands Eligible for Inclusion
- DNR Trust Lands
- US Forest Service



0 0.3 0.6 1.2 Miles

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DW 5-1-2012



Trout Lake NAP

East Cascades Ecoregion

MAP LEGEND

-  Proposed Expansion Boundary
-  Existing Trout Lake NAP
-  Garry oak habitat
-  Stream
-  US Forest Service



0 0.05 0.1 0.2 Miles

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